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मानक

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IS 15874 (2009): Industrial, scientific and medical equipment (ISM) - Guidelines for emission levels within the bands designated by the ITU [LITD 9: Electromagnetic Compatibility]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
औद्योगिक, वैज्ञानिक और चिकित्सा उपस्कर
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उत्सर्जन स्तर के लिये मार्गदर्शी सिद्धांत

Indian Standard

INDUSTRIAL, SCIENTIFIC AND MEDICAL EQUIPMENT
(ISM) — GUIDELINES FOR EMISSION LEVELS WITHIN
THE BANDS DESIGNATED BY THE ITU

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
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Indian Standard

INDUSTRIAL, SCIENTIFIC AND MEDICAL EQUIPMENT
(ISM) — GUIDELINES FOR EMISSION LEVELS WITHIN
THE BANDS DESIGNATED BY THE ITU

1 Scope

This technical report provides the guidelines for emission levels within the bands designated by the ITU for ISM application.

2 Reference document

CISPR 11: 1990, *Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment*

3 Typical levels of radiation

Certain frequencies are designated by the International Telecommunication Union (ITU) for use as fundamental frequencies for ISM equipment. These frequencies are listed in table 1.

Typical levels of radiation which may be encountered within the bands, measured in accordance with clauses 9 and 10 of CISPR 11, are included in table 1 for guidance for radio planning purposes. For frequencies up to 2,5 GHz, the levels relate to a distance of 30 m from the ISM installation. For frequencies greater than 2,5 GHz, information was not available at the time of discussion.

Table 1 – Range of measured levels of field strength from ISM equipment
in the ITU designated ISM bands

Centre frequency ¹⁾ MHz	Frequency range MHz	Number of appropriate footnote to the table to frequency allocation of ITU Radio Regulation	Range of measured field strength dB (µV/m) ³⁾
6,780	6,765 – 6,795	524	80 – 100
13,560	13,553 – 13,567	534	80 – 120
27,120	26,957 – 27,283	546	70 – 120
40,680	40 66 – 40,70	548	60 – 120
433,920	433,05 – 434,79	661,662 (region 1)	60 – 120
915,000 ²⁾	902 – 928	707 (region 2)	60 – 120
2 450	2 400 – 2 500	752	30 – 120
5 800	5 725 – 5 875	806	No information
24 125	24 000 – 24 250	881	No information
61 250	61 000 – 61 500	911	No information
122 500	122 000 – 123 000	916	No information
243 000	244 000 – 246 000	922	No information

¹⁾ In individual countries different or additional frequencies may be designated for ISM equipment

²⁾ 896 MHz in the United Kingdom

³⁾ The field strength is that existing at a distance of 30 m from the boundary of the building in which the ISM equipment is situated. Therefore the actual distance between the ISM equipment and the measuring point is not known.

High levels of non-ionizing radiation may be hazardous to health. Safety regulations take precedence over EMC rules and must be observed.

NATIONAL FOREWORD

This Indian Standard which is identical with CISPR 28 : 1997 'Industrial, scientific and medical equipment (ISM) — Guidelines for emission levels within the bands designated by the ITU' issued by the International Electrotechnical Commission (IEC) was adopted by the Bureau of Indian Standards on the recommendation of the Electromagnetic Compatibility Sectional Committee and approval of the Electronics and Information Technology Division Council.

The text of IEC (CISPR) Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'
- b) Comma (,) has been used as a decimal marker in the International Standard while in Indian Standards, the current practice is to use a point (.) as the decimal marker

Only the English language text in the International Standard has been retained while adopting it in this Indian Standard, and as such the page numbers given here are not the same as in the IEC Standard

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard

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This Indian Standard has been developed from Doc No.: LITD 09 (2030).

Amendments Issued Since Publication

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